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PTO/SB/21 (08-00)

Approval for use through 10/31/2002. OMB 0651-0031

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 <b>TRANSMITTAL FORM</b> (to be used for all correspondence after initial filing)	<b>Application Number</b>	10/036,328	
	<b>Filing Date</b>	Oct 29, 2001	
	<b>First Named Inventor</b>	Hu, Yi	
	<b>Group Art Unit</b>	1646	
	<b>Examiner Name</b>	Not Yet Assigned	
<b>Total Number of Pages in This Submission</b>	9	<b>Attorney Docket Number</b>	LEX-0262-USA

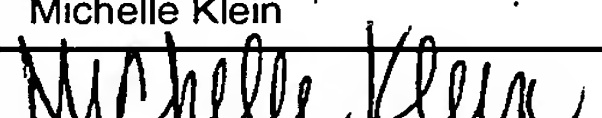
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<b>Firm or Individual name</b>	Lance K. Ishimoto, Reg. No. 41,866 Lexicon Genetics Incorporated	 <b>24231</b> PATENT TRADEMARK OFFICE
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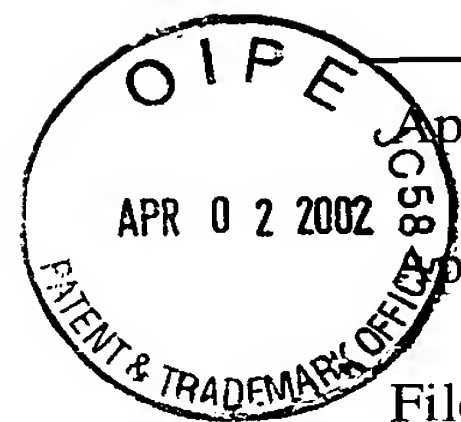
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24231

PATENT TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant(s): Hu et al.

Application No.: 10/036,328

Filed: October 29, 2001

Group Art Unit: 1646

Title: Novel Human 7TM Proteins and  
Polynucleotides Encoding the Same

Examiner: Not Yet Assigned

Attorney Docket No.: LEX-0262-USA

Assistant Commissioner for Patents  
Washington, D.C. 20231  
Box DD

**INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Certification under 37 CFR 1.97(e), or  
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☒ Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement to Lexicon Genetics Deposit Account No. 50-0892. A copy of this sheet is enclosed.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

3/22/02  
Date

Lance K. Ishimoto by Lance K. Ishimoto Reg. No. 41,866  
Lance K. Ishimoto

LEXICON GENETICS INCORPORATED  
(281) 863-3333



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Substitute for form 1449A/PTO			<b>Complete if Known</b>		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			Application Number	10/036,328	
			Filing Date	October 29, 2001	
			First Named Inventor	Hu	
			Group Art Unit	1646	
			Examiner Name	Not Yet Assigned	
			Attorney Docket Number	LEX-0262-USA	
Sheet	1	of	4		

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	AA	4,215,051		Schroeder et al	07/29/80	
	AB	4,376,110		David et al	03/08/83	
	AC	4,594,595		Struckman	06/10/86	
	AD	4,631,211		Houghten	12/23/86	
	AE	4,683,195		Mullis et al.	7/28/87	
	AF	4,683,202		Mullis	07/28/87	
	AG	4,689,405		Frank et al	08/25/87	
	AH	4,713,326		Dattagupta et al	12/15/87	
	AI	4,800,159		Mullis et al.	1/24/89	
	AJ	4,873,191		Wagner et al	10/10/89	
	AK	4,946,778		Ladner et al	08/07/90	
	AL	5,075,217		Weber	12/24/91	
	AM	5,252,743		Barrett et al	10/12/93	
	AN	5,272,057		Smulson et al.	12/21/93	
	AO	5,283,173		Fields et al.	2/1/94	
	AP	5,364,759		Caskey et al.	11/15/94	
	AQ	5,424,186		Fodor et al	06/13/95	
	AR	5,445,934		Fodor et al	08/29/95	
	AS	5,459,127		Felgner et al	10/17/95	
	AT	5,468,614		Fields et al.	11/21/95	
	AU	5,491,084		Chalfie et al.	02/13/96	
	AV	5,556,752		Lockhart et al	09/17/96	
	AW	5,625,048		Tsien et al	04/29/97	
	AX	5,667,973		Fields et al.	9/16/97	
	AY	5,700,637		Southern	12/23/97	
	AZ	5,723,323		Kauffman et al.	03/03/98	
	BA	5,744,305		Fodor et al	04/28/98	
	BB	5,777,079		Tsien et al.	07/07/98	
	BC	5,795,737		Seed et al.	08/18/98	
	BD	5,804,387		Cormack et al.	09/08/98	
	BE	5,830,721		Stemmer et al	11/03/98	
	BF	5,837,458		Minshull et al	11/17/98	
	BG	5,869,336		Meyer et al.	02/09/99	
	BH	5,874,304		Zolotukhin et al.	02/23/99	

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Substitute for form 1449B/PTO			<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)			Application Number	10/036,328
			Filing Date	October 29, 2001
			First Named Inventor	Hu
			Group Art Unit	1646
			Examiner Name	Not Yet Assigned
			Attorney Docket Number	LEX-0262-USA
Sheet	2	of	4	

U.S. PATENT DOCUMENTS						
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		Number	Kind Code <sup>2</sup> (if known)			
	BI	5,877,397		Lonberg et al.	03/02/99	
	BJ	5,891,720		Moore et al.	04/06/99	
	BK	5,942,416		Bergsma et al.	08/24/99	
	BL	5,948,767		Scheule et al.	09/07/99	
	BM	5,968,750		Zolotukhin et al.	10/19/99	
	BN	5,976,796		Szalay et al.	11/2/99	
	BO	6,020,192		Muzyczka et al.	02/01/00	
	BP	6,027,881		Pavlakis et al.	02/22/00	
	BQ	6,054,321		Tsien et al.	04/25/00	
	BR	6,075,181		Kucherlapati et al.	06/13/00	
	BS	6,096,865		Michaels	08/01/00	
	BT	6,110,490		Thierry	08/29/00	
	BU	6,146,826		Chalfie et al.	11/14/00	
	BV	6,150,584		Kucherlapati et al.	11/21/00	
	BW	6,172,188		Thastrup et al.	01/09/01	
	BX	6,265,548		Pavlakis et al.	06/24/01	

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	BZ	Askew et al, 1989, "Molecular Recognition with Convergent Functional Groups, 6. Synthetic and Structural Studies with a Model Receptor for Nucleic Acid Components", J. Am. Chem. Soc. 111:1082-1090.		
	CA	Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426.		
	CB	Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544.		
	CC	Butler, 1981, "The Amplified ELISA: Principles of and Applications for the Comparative Quantitation of Class and Subclass Antibodies and the Distribution of Antibodies and Antigens in Biochemical Separates", Methods in Enzymology 73:482-523.		

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	CD	Chien et al, 1991, "The two-hybrid system: A method to identify and clone genes for proteins that interact with a protein of interest", Proc. Natl. Acad. Sci. USA 88:9578-9582.	
	CE	Colbere-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1-14.	
	CF	Gautier et al, 1987, "α-DNA IV: α-anomeric and β-anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physicochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641.	
	CG	Gordon, 1989, "Transgenic Animals", International Review of Cytology, 115:171-229.	
	CH	Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444.	
	CI	Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106.	
	CJ	Houghten et al, 1991, "Generation and use of synthetic peptide combinatorial libraries for basic research and drug discovery", Nature 354:84-86.	
	CK	Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281.	
	CL	Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883.	
	CM	Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and RNase H", FEBS Letters 215(2):327-330.	
	CN	Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149.	
	CO	Inouye & Inouye, 1985, "Up-promoter mutations in the lpp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110.	
	CP	Janknecht et al, 1991, "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus", PNAS 88:8972-8976.	
	CQ	Kohler & Milstein, 1975, "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 256:495-497.	
	CR	Lakso et al, 1992, "Targeted oncogene activation by site-specific recombination in transgenic mice", Proc. Natl. Acad. Sci. USA 89:6232-6236.	
	CS	Lam et al, 1991, "A new type of synthetic peptide library for identifying ligand-binding activity", Nature 354:82-84.	
	CT	Lavitrano et al, 1989, "Sperm Cells as Vectors for Introducing Foreign DNA into Eggs: Genetic Transformation of Mice", Cell 57:717-723.	
	CU	Lewis et al, 1989, "Automated site-directed drug design: the formation of molecular templates in primary structure generation", Proc. R. Soc. Lond. B 236:141-162.	
	CV	Lewis and Dean, 1989, "Automated site-directed drug design: the concept of spacer skeletons for primary structure generation", Proc. R. Soc. Lond. B 236:125-140.	
	CW	Logan et al, 1984, "Adenovirus tripartite leader sequence enhances translation of mRNAs late after infection", Proc. Natl. Acad. Sci. USA 81:3655-3659.	
	CX	Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster apt Gene", Cell 22:817-823.	
	CY	Luo et al, 1997, "Mammalian Two-Hybrid System: A Complementary Approach to the Yeast Two-Hybrid System", BioTechniques 22(2):350-352.	
	CZ	McKinlay et al, 1989, "Rational Design of Antiviral Agents", Annu. Rev. Pharmacol. Toxicol. 29:111-122.	



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Sheet	4	of	4	Attorney Docket Number	LEX-0262-USA

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
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	DA	Miyajima et al, 1986, "Expression of murine and human granulocyte-macrophage colony-stimulating factors in <i>S. cerevisiae</i> : mutagenesis of the potential glycosylation sites", The EMBO Journal 5(6):1193-1197.	
	DB	Morrison et al, 1984, "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 81:6851-6855.	
	DC	Mulligan & Berg, 1981, "Selection for animal cells that express the Escherichia coli gene coding for xanthine-guanine phosphoribosyltransferase", Proc. Natl. Acad. Sci. USA 78(4):2072-2076.	
	DD	Neuberger et al, 1984, "Recombinant antibodies possessing novel effector functions", Nature 312:604-608.	
	DE	Nisonoff, 1991, "Idiotypes: Concepts and Applications", J. of Immunology 147:2429-2438.	
	DF	O'Hare et al, 1981, "Transformation of mouse fibroblasts to methotrexate resistance by a recombinant plasmid expressing a prokaryotic dihydrofolate reductase", Proc. Natl. Acad. Sci. USA 78(3):1527-1531.	
	DG	Platt, K.A. et al, 1994, "Independent Regulation of Adipose Tissue-specificity and Obesity Response of the Adipsin Promoter in Transgenic Mice", The Journal of Biological Chemistry 269(46):28558-28562.	
	DH	Ripka, 1988, "Computers picture the perfect drug", New Scientist 16:54-57.	
	DI	Ruther et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794.	
	DJ	Santerre et al, 1984, "Expression of prokaryotic genes for hygromycin B and G418 resistance as dominant-selection markers in mouse L cells", Gene 30:147-156.	
	DK	Sarin et al, 1988, "Inhibition of acquired immunodeficiency syndrome virus by oligodeoxynucleoside methylphosphonates", Proc. Natl. Acad. Sci. USA 85:7448-7451.	
	DL	Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593.	
	DM	Songyang et al, 1993, "SH2 Domains Recognize Specific Phosphopeptide Sequences", Cell 72:767-778.	
	DN	Stein et al, 1988, "Physiochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221.	
	DO	Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034.	
	DP	Takeda et al, 1985, "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 314:452-454.	
	DQ	Thompson et al, 1989, "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targeting in Embryonic Stem Cells", Cell 56:313-321.	
	DR	Van Der Putten et al, 1985, "Efficient insertion of genes into the mouse germ line via retroviral vectors", Proc. Natl. Acad. Sci. USA 82:6148-6152.	
	DS	Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509.	
	DT	Voller et al, 1978, "Enzyme immunoassays with special reference to ELISA techniques", J. Clinical Pathology 31:507-520.	
	DU	Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546.	
	DV	Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell 11:223-232.	
	DW	Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570.	

Examiner Signature		Date Considered	
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